

01/07/99

jc520 U.S. PTO

Please type a plus sign (+) inside this box → ☒PTO/SB/05 (4/98)  
Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	90401-1
First Inventor or Application Identifier	Glen E. Thurber
Title	GRAPHITE ARROW AND METHOD OF MANUFACTURE
Express Mail Label No.	EL141934739US

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages **18**]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **2**]
4. Oath or Declaration [Total Pages **1**]
- a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting  
inventor(s) named in the prior application,  
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Copy
  - b. ☐ Paper Copy (identical to computer copy)
  - c. ☐ Statement verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of  
(when there is an assignee) ☐ Attorney
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure ☐ Copies of IDS  
Statement (IDS)/PTO-1449 ☐ Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
13. ☒ \* Small Entity ☐ Statement filed in prior application,  
Statement(s) ☐ Status still proper and desired  
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
15. ☒ Other: **Transmittal Cover Letter  
with Certificate of Express  
Mail**

**\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY  
FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT  
IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).****16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:**☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: \_\_\_\_\_/\_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_

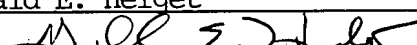
Group / Art Unit: \_\_\_\_\_

**For CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.**17. CORRESPONDENCE ADDRESS**☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below

Name	Gerald E. Helget				
	Mackall, Crounse & Moore, PLC				
Address	1400 AT&T Tower				
	901 Marquette Avenue				
City	Minneapolis	State	MN	Zip Code	55402
Country	U.S.A.	Telephone	(612) 305-1416	Fax	(612) 305-1414

Name (Print/Type)	Gerald E. Helget	Registration No. (Attorney/Agent)	30,948
Signature		Date	7 Jan 99

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re. Appln.: Glen E. Thurber  
Serial No.: Not yet assigned  
Filed: January 7, 1999  
For: GRAPHITE ARROW AND METHOD OF MANUFACTURE  
Attorney: Gerald E. Helget  
Attorney  
Docket No.: 90401-1  
Additional  
Fees: Charge to Deposit Account 50-0475

BOX PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

TRANSMITTAL COVER LETTER

Enclosed for filing, please find the following:

1. Utility Patent Application Transmittal;
2. Fee Transmittal for FY 1999;
3. Specification with claims;
4. Two sheets of formal drawings;
5. Small Entity Declaration;
6. Declaration and Power of Attorney for Original Application;
7. Check in the amount of \$380.00; and
8. Postcard receipt.

Respectfully submitted,

Dated: 7 Jan 99

By Gerald E. Helget  
Gerald E. Helget (Reg. No. 30,948)  
Mackall, Crounse & Moore, PLC  
1400 AT&T Tower  
901 Marquette Avenue  
Minneapolis, MN 55402-2859  
Telephone: 612-305-1416

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this document, along with the documents referenced above, are being deposited with the United States Postal Service as Express Mail, Receipt No. EL141934739US, in an envelope addressed to: BOX PATENT APPLICATION, Assistant Commissioner for Patents, Washington, D.C. 20231, on the date indicated below.

By Gerald E. Helget  
Date 7 Jan 99

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**FEE TRANSMITTAL**  
**for FY 1999**Patent fees are subject to annual revision.  
Small Entity payments must be supported by a small entity statement,  
otherwise large entity fees must be paid. See Forms PTO/SB/09-12.**TOTAL AMOUNT OF PAYMENT** (\$)**380.00****Complete if Known**

Application Number	
Filing Date	January 7, 1999
First Named Inventor	Glen E. Thurber
Examiner Name	
Group / Art Unit	
Attorney Docket No.	90401-1

**METHOD OF PAYMENT (check one)**

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number	50-0475
Deposit Account Name	Mackall, Crounse & Moore

- ☒
- Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17

- 2.
- ☒
- Payment Enclosed:

☒ Check ☐ Money Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 760	201 380	Utility filing fee	380
106 310	206 155	Design filing fee	
107 480	207 240	Plant filing fee	
108 760	208 380	Reissue filing fee	
114 150	214 75	Provisional filing fee	

**SUBTOTAL (1)** (\$)**380.00****2. EXTRA CLAIM FEES**

Total Claims	Extra Claims	Fee from below	Fee Paid
16	-20** =		
3	-3** =	0	
Multiple Dependent			

\*\*or number previously paid, if greater; For Reissues, see below

**Large Entity Small Entity**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
103 18	203 9	Claims in excess of 20
102 78	202 39	Independent claims in excess of 3
104 260	204 130	Multiple dependent claim, if not paid
109 78	209 39	** Reissue independent claims over original patent
110 18	210 9	** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$)**-0-****FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet.	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 380	216 190	Extension for reply within second month	
117 870	217 435	Extension for reply within third month	
118 1,360	218 680	Extension for reply within fourth month	
128 1,850	228 925	Extension for reply within fifth month	
119 300	219 150	Notice of Appeal	
120 300	220 150	Filing a brief in support of an appeal	
121 260	221 130	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,210	241 605	Petition to revive - unintentional	
142 1,210	242 605	Utility issue fee (or reissue)	
143 430	243 215	Design issue fee	
144 580	244 290	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 760	246 380	Filing a submission after final rejection (37 CFR 1.129(a))	
149 760	249 380	For each additional invention to be examined (37 CFR 1.129(b))	
Other fee (specify)			
Other fee (specify)			

\* Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$)**-0-****SUBMITTED BY**Typed or Printed Name **Gerald E. Helget**

Signature

Date

7/15/99

**Complete (if applicable)**Reg. Number **30,948**Deposit Account User ID **50-0475**

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.